

t47_helly
(TMa73jq7xrFd8HCsoUSVdMnLejKq7hw56Qd)

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Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v1_glib_000 : \iota \Rightarrow o$ be given. Let $v3_glib_002 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_glib_000 : \iota \Rightarrow \iota$ be given. Let $k3_helly : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k13_glib_001 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_helly : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ & X0) \wedge ((v1_finset_1 X0) \wedge ((v1_glib_000 X0) \wedge (v3_glib_002 X0)))))) \Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (k6_glib_000 X0)) \Rightarrow (\forall X2.(m1_subset_1 \\ & X2 (k6_glib_000 X0)) \Rightarrow (\forall X3.(m1_subset_1 X3 (k6_glib_000 \\ & X0)) \Rightarrow ((X3 \in k13_glib_001 X0 (k2_helly X0 X1 X2)) \Rightarrow (k3_helly X0 X1 \\ & X2 X3 = X3)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ & X0) \wedge ((v1_finset_1 X0) \wedge ((v1_glib_000 X0) \wedge (v3_glib_002 X0)))))) \Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (k6_glib_000 X0)) \Rightarrow (\forall X2.(m1_subset_1 \\ & X2 (k6_glib_000 X0)) \Rightarrow ((X1 \in k13_glib_001 X0 (k2_helly X0 X1 X2)) \wedge \\ & (X2 \in k13_glib_001 X0 (k2_helly X0 X1 X2)))))) \end{aligned} \tag{2}$$

Theorem 1

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ & X0) \wedge ((v1_finset_1 X0) \wedge ((v1_glib_000 X0) \wedge (v3_glib_002 X0)))))) \Rightarrow \\ & (\forall X1.(m1_subset_1 X1 (k6_glib_000 X0)) \Rightarrow (k3_helly X0 X1 \\ & X1 X1 = X1)) \end{aligned}$$